

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PATENT
Attorney Docket No.: 015389-002943US
Client Reference No.: 018/181C

On October 6, 2003

TOWNSEND and TOWNSEND and CREW LLP

By: Nicole M. Wartell
Nicole M. Wartell

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Cech et al.

Application No.: 09/843,676

Filed: April 26, 2001

For: NOVEL TELOMERASE

Examiner:

Art Unit: 1646

SUPPLEMENTAL INFORMATION
DISCLOSURE STATEMENT UNDER 37
CFR §1.97 and §1.98

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The references cited on attached form PTO/SB/08A and PTO/SB/08B are being called to the attention of the Examiner. Copies of the references are enclosed. It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no

representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicant believes that no fee is required for submission of this statement.

However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,



Scott L. Ausenhus
Reg. No. 42,271

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, 8th Floor
San Francisco, California 94111-3834
Tel: 303-571-4000
Fax: 303-571-4321
SLA:nmb
60037352 v1



Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 1 of 4

Complete if Known

Application Number	09/843,676
Filing Date	April 26, 2001
First Named Inventor	Cech, Thomas R.
Art Unit	1646
Examiner Name	
Attorney Docket Number	015389-002943US

U.S. PATENT DOCUMENTS+

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number Kind Code ² (if known)			
	A1	US-5,597,697	01-28-1997	Diamond	
	A2	US-5,917,025	06-29-1999	Collins	
	A3	US-5,919,656	07-06-1999	Harrington, et al.	
	A4	US-6,166,178	12-26-2000	Cech et al.	
	A5	US-6,309,867 B1	10-30-2001	Cech et al.	
	A6	US-6,337,200 B1	01-08-2002	Morin	
	A7	US-6,475,789 B1	11-05-2002	Cech et al.	
	A8	US-6,610,839 B1	08-26-2003	Cech et al.	
	A9	US-6,617,110 B1	09-09-2003	Cech et al.	
	A10	US-6,258,535 B1	07-10-2001	Villeponteau et al.	
	A11	US-6,261,556 B1	07-17-2001	Weinrich et al.	
	A12	US-6,261,836 B1	07-17-2001	Cech et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³	Number ⁴	Kind Code ⁵ (if known)				
	B1	GB	2 317 891	A ✓	04-08-1998			<input type="checkbox"/>
	B2	PCT	WO 84/03564	A1 ✓	09-13-1984			<input type="checkbox"/>
	B3	PCT	WO 94/17210	A1 ✓	08-04-1994			<input type="checkbox"/>
	B4	PCT	WO 98/14592	A2 ✓	04-09-1998			<input type="checkbox"/>
	B5	PCT	WO 98/14593	A2 ✓	04-09-1998			<input type="checkbox"/>
	B6	PCT	WO 99/33998	A2 ✓	07-08-1999			<input type="checkbox"/>
	B7	PCT	WO 99/38964	A2 ✓	08-05-1999			<input type="checkbox"/>
	B8	PCT	WO 00/46355	A2 ✓	08-10-2000			<input type="checkbox"/>

Examiner
SignatureDate
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² Kind Codes of U.S. Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.



Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 2 of 4

Complete if Known

Application Number	09/843,676
Filing Date	April 26, 2001
First Named Inventor	Cech, Thomas R.
Art Unit	1646
Examiner Name	
Attorney Docket Number	015389-002943US

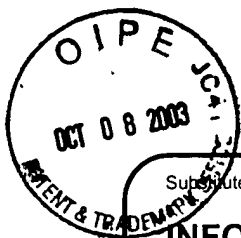
NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	C1 ✓	ADAMSON, D. et al. "Significant Telomere Shortening in Childhood Leukemia", <i>Cancer Genet. Cytogenet.</i> , 1992; pp. 204-206, Vol. 61	
	C2 ✓	CHIU, et al. "Replicative senescence and cell immortality: the role of telomeres and telomerase (44075)", <i>Proc. Soc. Exp. Bio. Med.</i> , 1997, pp. 99-106, Vol. 214.	
	C3 ✓	CHONG, L. et al. "A Human Telomeric Protein", <i>Science</i> , Dec. 1995, pp. 1663-1667, Vol. 270.	
	C4 ✓	COUNTER, C. et al. "Telomerase activity in human ovarian carcinoma"; <i>Proc. Natl. Acad. Sci USA</i> ; April 1994; Vol. 91; pp. 2900-2904	
	C5 ✓	COUNTER, C. et al. "Telomerase Activity in Normal Leukocytes and in Hematologic Malignancies" <i>Blood</i> ; May 1, 1995; pp. 2315-2320, Vol. 85, No. 9.	
	C6 ✓	COUNTER, C. et al. "Telomere shortening associated with chromosome instability is arrested in immortal cells which express telomerase activity", <i>The EMBO Journal</i> ; 1992, pp. 1921-1929, Vol. 11; No. 5, Oxford University Press.	
	C7 ✓	DE LANGE, T. et al. "Structure and Variability of Human Chromosome Ends"; <i>Molecular and Cellular Biology</i> ; February 1990; pp. 518-527, Vol. 10, No. 2.	
	C8 ✓	FLAVELL, R. & MATHIAS, R. "Prospects for transforming monocot crop plants", <i>Nature</i> , 12 Jan. 1984, pp. 108-109, Vol. 307.	
	C9	FRESHNEY, <i>Culture of Animal Cells, A Manual Basic Technique</i> , p. 4, Alan R. Liss, Inc. New York, 1983.	
	C10 ✓	Genbank Accession No. A46242; September 21, 1993	
	C11 ✓	Genbank Accession No. L38903; January 30, 1995	
	C12 ✓	Genbank Accession No. Q06163; November 01, 1995	
	C13 ✓	Genbank Accession No. S39696; October 07, 1994	
	C14 ✓	Genbank Accession No. S53396; May 5, 1995	
	C15 ✓	GenBank Accession No. U95964; May 5, 1997	
	C16 ✓	GLASER, P. et al. "Bacillus subtilis genome project: cloning and sequencing of the 97 kb region from 325° to 333°" <i>Molecular Microbiology</i> , 1993, pp. 371-384, Vol. 10, No. 2.	
	C17 ✓	GOODMAN, R. et al. "Gene Transfer in Crop Improvement", <i>Science</i> , 3 April 1997, pp. 48-54, Vol. 236.	

Examiner
SignatureDate
Considered

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.



Supplement for form 1449B/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 3 of 4

Complete if Known

Application Number	09/843,676
Filing Date	April 26, 2001
First Named Inventor	Cech, Thomas R.
Art Unit	1646
Examiner Name	
Attorney Docket Number	015389-002943US

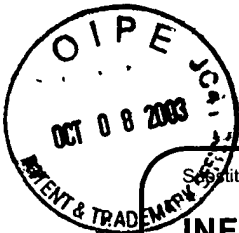
NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	C18	GREIDER, C. "Telomeres, Telomerase and Senescence"; <i>BioEssays</i> ; 1990; pp. 363-369, Vol. 12, No. 8.	
	C19	HARLEY, C. "Telomere loss: Mitotic clock or genetic time bomb?" <i>Mutation Research</i> ; 1991; pp. 271-282, Vol. 256, Elsevier Science Publishers.	
	C20	HARLEY, C. & VILLEPONTEAU, B. "Telomeres and telomerase in aging and cancer" <i>Current Opinion in Genetics and Development</i> ; 1995, pp. 249-255, Vol. 5.	
	C21	HARLEY, C. et al. "Telomeres shorten during ageing of human fibroblasts", <i>Nature</i> , 31 May 1990; pp. 458-460, Vol. 345.	
	C22	HASTIE, N. et al. "Telomere reduction in human colorectal carcinoma and with ageing", <i>Nature</i> , 30 August 1990, pp. 866-868, Vol. 346.	
	C23	HEALY, K. C. "Telomere dynamics and telomerase activation in tumor progression: prospects for prognosis and therapy" <i>Oncol. Res.</i> , 1995, pp. 121-130, Vol. 7.	
	C24	HENDERSON, C. Cancer genetics gene regulates telomerase resulting in death of cancer cells; <i>Gene Therapy Weekly</i> ; 11 September 1995	
	C25	HIYAMA, E. et al. "Correlating telomerase activity levels with human neuroblastoma outcomes"; <i>Nature Medicine</i> ; 3 March 1995; pp. 249-255, Vol. 1, No. 3.	
	C26	HOLTZMANN, K. et al. "Telomeric Associations and Loss of Telomeric DNA Repeats in Renal Tumors", <i>Genes, Chromosomes & Cancer</i> , 1993, pp. 178-181, Vol. 6.	
	C27	JÄHNE, A. et al. "Genetic Engineering of Cereal Crop Plants: A Review", <i>Euphytica</i> , 1995, pp. 35-44, Vol. 85, Kluwer Academic Publishers, Netherlands.	
	C28	JOHNSON, P. et al., "Expression of Wild-Type p53 Is Not Compatible with Continued Growth of p53-Negative Tumor Cells", <i>Molecular and Cellular Biology</i> , Jan. 1991, p. 1-11, Vol. 11, No. 1.	
	C29	JOLLIFFE, L.K. "Humanized antibodies: enhancing therapeutic utility through antibody engineering", <i>Int. Rev. Immunol.</i> , 1993, pp. 241-250, Vol. 10.	
	C30	KIM, N. et al. "Specific Association of Human Telomerase Activity with Immortal Cells and Cancer", <i>Science</i> , 23 December 1994, pp. 2011-2014, Vol. 266.	
	C31	KLINGELHUTZ, A. et al. "Restoration of Telomeres in Human Papillomavirus-Immortalized Human Anogenital Epithelial Cells"; <i>Molecular and Cellular Biology</i> ; Feb. 1994, pp. 961-969, Vol. 14, No. 2.	
	C32	LEWIS, A. & CROWE, J.S. "Generation of humanized monoclonal antibodies by 'best fit' framework selection and recombinant polymerase chain reaction", <i>Year Immunol.</i> , 1993, pp. 110-118, Vol. 7.	
	C33	Linking telomerase and tumors; <i>Genesis Report- Dx</i> ; 1995; Vol. 4, No. 6; Publisher Genesis Group Associates	
	C34	MALICKI, J. et al. "A human <i>HOX4B</i> regulatory element provides head-specific expression in <i>Drosophila</i> embryos", <i>Nature</i> , 23 July 1992, pp. 345-357, Vol. 358.	

Examiner
SignatureDate
Considered

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.



Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 4 of 4

Complete if Known

Application Number	09/843,676
Filing Date	April 26, 2001
First Named Inventor	Cech, Thomas R.
Art Unit	1646
Examiner Name	
Attorney Docket Number	015389-002943US

NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	C35 ✓	NATARAJAN et al. "Major histocompatibility complex determinants select T-cell receptor alpha chain variable region dominance in a peptide-specific response." <i>Proc. Natl. Acad. Sci.</i> , Oct 1992, pp. 8874- 8878, Vol. 19.	
	C36 ✓	PASZKOWSKI, JERZY et al. "Direct gene transfer to plants," <i>The EMBO Journal</i> , 1984, pp. 2717- 2722, Vol. 3, No. 12.	
	C37 ✓	POTRYKUS, I. et al. "Direct gene transfer to cells of a graminaceous monocot", <i>Mol. Gen. Genet.</i> , 1985, pp. 183-188, Vol. 199.	
	C38 ✓	RAYMOND, E., et al.; Agents that target telomerase and telomeres; <i>Curr. Opin. Biotechnol.</i> ; 1996; 7:583-91	
	C39 ✓	RHYU, M.S. "Telomeres, telomerase, and immortality"; <i>J. Natl. Cancer Inst.</i> ; 21 June 1995; pp. 884- 894, Vol. 87, No. 12.	
	C40 ✓	SCHENA et al. "Parallel human genome analysis: Microarray-based expression monitoring of 1000 genes", <i>Proc. Natl. Acad. Sci.</i> , Oct. 1996, pp. 10614-10619, Vol. 93, USA.	
	C41 ✓	SCHWARTZ, H. et al. "Telomere Reduction in Giant Cell Tumor of Bone and with Aging"; <i>Cancer Genet Cytogenet</i> ; 1993; pp. 132-138, Vol. 71, Elsevier Science Publishing Co., Inc., New York, U.S.A.	
	C42 ✓	SMITH, J. & YEH, G. "Telomere Reduction in Endometrial Adenocarcinoma"; <i>Am. J. Obstet. Gynecol.</i> ; Dec. 1992; pp. 1883-1887, Vol. 167, No. 6	
	C43 ✓	TAIT, J. et al. "Structure and Polymorphisms of the Human Annexin III (ANX3) Gene", <i>Genomics</i> , 1993, pp. 79-86, Vol. 18, No. 1	
	C44 ✓	WINTER, G. & HARRIS, W. "Humanized Antibodies", <i>Trends Pharmacol. Sci.</i> , May 1993, pp. 139- 143, Vol. 14.	
	C45 ✓	WIRTH, URS et al; "Immediate-Early RNA 2.9 and Early RNA 2.6 of Bovine Herpesvirus 1 Are 3' Coterminal and Encode of Putative Zinc Finger Transactivator Protein"; <i>Journal of Virology</i> ; May 1992; pp. 2763-2772, Vol. 66, No. 5.	

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.